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Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (currently amended) A An implantable medical electrical lead, comprising:
an elongated body including a proximal end, a distal end, and a conductor extending from the proximal end toward the distal end; and
an electrode at the distal end of the elongated body adapted for pacing myocardial tissue via intimate contact with a surface of the electrode, the electrode including:
an insulative housing ~~formed about the distal end of the body and~~ including a closed cavity and a port;
a conductive structure formed within the cavity, coupled to the conductor and including an electrode surface contained within the cavity;
an ionically conductive fluid medium filling the cavity in intimate contact with the electrode surface; and
an insulated helical fixation member coupled to the distal end of the body and extending distally from the distal end;
wherein, when a current is delivered, via the conductor, to the electrode surface contained within the cavity, a first current density is generated at the electrode surface and a second current density is generated out from the port of the insulative housing, the first current density being smaller than the second current density; and
when the helical fixation member is engaged in tissue, the port forms a high impedance and low polarization tissue-stimulating electrode.

2. (previously presented) The lead of claim 1, wherein the conductive structure formed within the cavity further includes a second electrode surface

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circumscribed by the port of the cavity from which the second current density is generated.

3. (previously presented) The lead of claim 2, wherein the second electrode surface area is approximately flush with the port.

4. (previously presented) The lead of claim 2, wherein the second electrode surface area protrudes from the port.

5. (currently amended) The lead of claim 4, wherein the second electrode surface ~~pierces~~ is adapted to pierce tissue when the helical fixation member is engaged in tissue.

6. (cancelled)

7. (previously presented) The lead of claim 2, wherein the conductive structure formed within it the cavity comprises a proximal extension of the helical fixation member.

8. (previously presented) The lead of claim 2, wherein the conductive structure formed within the cavity comprises a stud joining the helical fixation member to the conductor.

9. (previously presented) The lead of claim 1, wherein the port of the insulative housing has a cross-sectional area between approximately 0.1 square millimeters and 4.0 square millimeters.

10. (previously presented) The lead of claim 1, wherein the electrode surface of the conductive structure is approximately greater than or equal to approximately 10 square millimeters.

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11. (previously presented) The lead of claim 1, wherein the conductive structure formed within the cavity comprises a proximal extension of the helical fixation member.

12. (previously presented) The lead of claim 11, wherein the helical fixation member includes an un-insulated zone forming a second electrode surface distal from the port from which the second current density is generated.

13. (previously presented) The lead of claim 1, wherein the conductive structure formed within the cavity comprises a stud joining the helical fixation member to the conductor.

14. (previously presented) The lead of claim 1, wherein the ionically conductive medium filling the cavity comprises a hydrogel.

15. (previously presented) The lead of claim 1, wherein the ionically conductive medium filling the cavity comprises a saline solution.

16. (previously presented) The lead of claim 1, wherein the helical fixation member is retractable into the insulative housing and extendable therefrom.

17. (previously presented) The lead of claim 1, wherein the electrode surface of the conductive structure comprises platinum black particles.

18. (previously presented) The lead of claim 1, wherein the electrode surface of the conductive structure comprises an iridium-oxide.

19. (previously presented) The lead of claim 1, wherein the electrode surface of the conductive structure comprises a ruthenium-oxide.

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20. (previously presented) The lead of claim 1, wherein the electrode surface of the conductive structure comprises titanium-nitride.

21. (previously presented) The lead of claim 1, further comprising a steroid-loaded MCRD formed about the insulative housing in proximity to the port.

22. (previously presented) The lead of claim 1, wherein the insulated helical fixation member comprises an oxide-coated tantalum.

23. (currently amended) A An implantable medical electrical lead, comprising:
an elongated body including a proximal end, a distal end, and a conductor extending from the proximal end toward the distal end; and
an electrode at the distal end of the elongated body adapted for pacing myocardial tissue via intimate contact with a surface of the electrode, the electrode including:
an insulative housing formed about the distal end of the body and including a closed cavity and a port;
a conductive structure formed within the cavity, coupled to the conductor and including a first electrode surface contained within the cavity and a second electrode surface circumscribed by the port; and
an ionically conductive fluid medium filling the cavity in intimate contact with the first electrode surface;
wherein, when a current is delivered, via the conductor, to the first electrode surface contained within the cavity, a first current density is generated at the first electrode surface and a second current density is generated at the second electrode surface, the first current density being smaller than the second current density so that the second electrode surface circumscribed by the port forms a high impedance and low polarization stimulating electrode.

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24. (previously presented) The lead of claim 23, wherein the second electrode surface area is approximately flush with the port.

25. (previously presented) The lead of claim 23, wherein the second electrode surface area protrudes from the port.

26. (previously presented) The lead of claim 23, wherein the second electrode surface is smooth such that a microscopic surface area of the second electrode surface is not significantly greater than a macroscopic surface area of the second electrode surface.

27. (previously presented) The lead of claim 23, wherein the second electrode surface of the conductive structure has a surface area between approximately 0.1 square millimeters and 4.0 square millimeters.

28. (previously presented) The lead of claim 23, wherein the first electrode surface of the conductive structure is approximately greater than or equal to approximately 10 square millimeters.

29. (previously presented) The lead of claim 23, wherein the ionically conductive medium filling the cavity comprises a hydrogel.

30. (previously presented) The lead of claim 23, wherein the ionically conductive medium filling the cavity comprises a saline solution.

31. (previously presented) The lead of claim 23, wherein the first electrode surface of the conductive structure comprises platinum black particles.

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32. (previously presented) The lead of claim 23, wherein the first electrode surface of the conductive structure comprises an iridium-oxide.

33. (previously presented) The lead of claim 23, wherein the first electrode surface of the conductive structure comprises a ruthenium-oxide.

34. (previously presented) The lead of claim 23, wherein the first electrode surface of the conductive structure comprises titanium-nitride.

35. (previously presented) The lead of claim 23, further comprising a steroid-loaded MCRD formed about the insulative housing in proximity to the port.